US006229481B1

(12) **United States Patent**
**Katz**

(10) **Patent No.: US 6,229,481 B1**
(45) **Date of Patent: May 8, 2001**

(54) **METHOD OF IMPROVING QUALITY OF RADIO CONNECTION**

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( * ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/341,095**

(22) PCT Filed: **Nov. 4, 1998**

(86) PCT No.: **PCT/FI98/00855**

§ 371 Date: **Oct. 19, 1999**

§ 102(e) Date: **Oct. 19, 1999**

(87) PCT Pub. No.: **WO99/25142**

PCT Pub. Date: **May 20, 1999**

(30) **Foreign Application Priority Data**

Nov. 5, 1997 (FI) ..... 974149
Mar. 19, 1998 (FI) ..... 980616

(51) **Int. Cl.**[7] ..... **H04B 7/00**
(52) **U.S. Cl.** ..... **342/367**; 455/25; 455/562
(58) **Field of Search** ..... 342/367, 372; 455/562, 25, 517

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(57) **ABSTRACT**

The invention relates to a method of improving the quality of a radio connection (**170**) in a cellular radio network. Relevant for the invention, the cellular radio network includes a base station system (**126**) and a subscriber terminal (**150**). A bi-directional radio connection (**170**) using a directional antenna beam (**304**) is provided between the base station system (**126**) and the subscriber terminal (**150**). In the method, in the base station system (**126**) an angle of incidence (**302**) of the directional antenna beam (**304**) is formed on the basis of a received radio signal (**170A**) transmitted by the subscriber terminal (**150**). The base station system (**126**) transmits a radio signal (**170B**) to the subscriber terminal (**150**) in the direction of an angle of departure (**308**) formed on the basis of the angle of incidence (**302**). In accordance with the invention, a ratio is formed for the imbalance between the downlink and uplink traffics. The processing of the directional antenna beam (**304**) of the radio signal (**170A, 170B**) is controlled on the basis of the formed ratio.

**48 Claims, 5 Drawing Sheets**